



Complete Summary

TITLE

Perioperative care: percentage of surgical patients aged 18 years and older who have an order for a parenteral antibiotic to be given within one hour (if vancomycin, two hours) prior to the surgical incision (or start of procedure when no incision is required) for whom administration of a prophylactic antibiotic has been initiated within one hour (if vancomycin, two hours) prior to the surgical incision (or start of procedure when no incision is required).

SOURCE(S)

American College of Surgeons, Physician Consortium for Performance Improvement®, National Committee for Quality Assurance. Perioperative care physician performance measurement set. Chicago (IL): American Medical Association, National Committee for Quality Assurance; 2006 Oct. 11 p. [8 references]

Measure Domain

PRIMARY MEASURE DOMAIN

Process

The validity of measures depends on how they are built. By examining the key building blocks of a measure, you can assess its validity for your purpose. For more information, visit the [Measure Validity](#) page.

SECONDARY MEASURE DOMAIN

Does not apply to this measure

Brief Abstract

DESCRIPTION

This measure is used to assess the percentage of surgical patients aged 18 years and older who have an order for a parenteral antibiotic to be given within one hour (if vancomycin, two hours) prior to the surgical incision (or start of procedure when no incision is required) for whom administration of a prophylactic antibiotic has been initiated within one hour (if vancomycin, two hours) prior to the surgical incision (or start of procedure when no incision is required).

RATIONALE

The appropriate timing of administration of prophylactic antibiotics has been demonstrated to reduce the incidence of surgical wound infections. Available evidence suggests that although most surgical patients receive a prophylactic antibiotic, many do not receive the drug within one hour before incision as recommended.*

*The following clinical recommendation statements are quoted verbatim from the referenced clinical guidelines and represent the evidence base for the measure:

The anti-infective drug should ideally be given within 30 minutes to 1 hour before the initial incision to ensure its presence in an adequate concentration in the targeted tissues. For most procedures, scheduling administration at the time of induction of anesthesia ensures adequate concentrations during the period of potential contamination. Exceptions: cesarean procedures (after cross clamping of the umbilical cord); colonic procedures (starting 19 hours before the scheduled time of surgery). (American Society of Health-System Pharmacists [ASHP])

Infusion of the first antimicrobial dose should begin within 60 min before incision. However, when a fluoroquinolone or vancomycin is indicated, the infusion should begin within 120 min before incision to prevent antibiotic-associated reactions. Although research has demonstrated that administration of the antimicrobial at the time of anesthesia induction is safe and results in adequate serum and tissue drug levels at the time of incision, there was no consensus that the infusion must be completed before incision. (Surgical Infection Prevention Guidelines Writers Workgroup [SIPGWW])

PRIMARY CLINICAL COMPONENT

Perioperative care; timing of prophylactic parental antibiotics

DENOMINATOR DESCRIPTION

All surgical patients aged 18 years and older who have an order for a parenteral antibiotic to be given within one hour (if vancomycin, two hours) prior to the surgical incision (or start of procedure when no incision is required) (see the related "Denominator Inclusions/Exclusions" field in the Complete Summary)

NUMERATOR DESCRIPTION

Surgical patients for whom administration of a prophylactic antibiotic has been initiated within one hour (if vancomycin, two hours) prior to the surgical incision (or start of procedure when no incision is required)

Evidence Supporting the Measure

EVIDENCE SUPPORTING THE CRITERION OF QUALITY

- A clinical practice guideline or other peer-reviewed synthesis of the clinical evidence

Evidence Supporting Need for the Measure

NEED FOR THE MEASURE

Use of this measure to improve performance
Variation in quality for the performance measured

EVIDENCE SUPPORTING NEED FOR THE MEASURE

Agency for Healthcare Research and Quality (AHRQ). Making health care safer. A critical analysis of patient safety issues [AHRQ Publication No. 01-E058]. Rockville (MD): Agency for Healthcare Research and Quality (AHRQ); 2001 Jul. 672 p.(Evidence report /technology assessment; no. 43).

Bratzler DW, Houck PM, Richards C, Steele L, Dellinger EP, Fry DE, Wright C, Ma A, Carr K, Red L. Use of antimicrobial prophylaxis for major surgery: baseline results from the national surgical infection prevention project. Arch Surg 2005 Feb;140(2):174-82. [PubMed](#)

Leatherman S, McCarthy D. Quality of health care for medicare beneficiaries: a chartbook. Focusing on the elderly living in the community. Vol. 815 New York (NY): Commonwealth Fund; 2005 May. 184 p.

State of Use of the Measure

STATE OF USE

Current routine use

CURRENT USE

Internal quality improvement
National reporting

Application of Measure in its Current Use

CARE SETTING

Hospitals

PROFESSIONALS RESPONSIBLE FOR HEALTH CARE

Physicians

LOWEST LEVEL OF HEALTH CARE DELIVERY ADDRESSED

Individual Clinicians

TARGET POPULATION AGE

Age greater than or equal to 18 years

TARGET POPULATION GENDER

Either male or female

STRATIFICATION BY VULNERABLE POPULATIONS

Unspecified

Characteristics of the Primary Clinical Component

INCIDENCE/PREVALENCE

Unspecified

ASSOCIATION WITH VULNERABLE POPULATIONS

Unspecified

BURDEN OF ILLNESS

Unspecified

UTILIZATION

Unspecified

COSTS

Unspecified

Institute of Medicine National Healthcare Quality Report Categories

IOM CARE NEED

Getting Better

IOM DOMAIN

Effectiveness
Timeliness

Data Collection for the Measure

CASE FINDING

Users of care only

DESCRIPTION OF CASE FINDING

All surgical patients aged 18 years and older who have an order for a parenteral antibiotic to be given within one hour (if vancomycin, two hours) prior to the surgical incision (or start of procedure when no incision is required)

DENOMINATOR SAMPLING FRAME

Patients associated with provider

DENOMINATOR INCLUSIONS/EXCLUSIONS

Inclusions

All surgical patients aged 18 years and older who have an order for a parenteral antibiotic to be given within one hour (if vancomycin, two hours) prior to the surgical incision (or start of procedure when no incision is required)

Note: There must be documentation of order (written order, verbal order, or standing order/protocol) specifying that antibiotic is to be given within one hour (if vancomycin, two hours) prior to the surgical incision (or start of procedure when no incision is required).

Exclusions

Unspecified

RELATIONSHIP OF DENOMINATOR TO NUMERATOR

All cases in the denominator are equally eligible to appear in the numerator

DENOMINATOR (INDEX) EVENT

Therapeutic Intervention

DENOMINATOR TIME WINDOW

Time window is a single point in time

NUMERATOR INCLUSIONS/EXCLUSIONS

Inclusions

Surgical patients for whom administration of a prophylactic antibiotic has been initiated within one hour (if vancomycin, two hours) prior to the surgical incision (or start of procedure when no incision is required)

Exclusions

None

MEASURE RESULTS UNDER CONTROL OF HEALTH CARE PROFESSIONALS, ORGANIZATIONS AND/OR POLICYMAKERS

The measure results are somewhat or substantially under the control of the health care professionals, organizations and/or policymakers to whom the measure applies.

NUMERATOR TIME WINDOW

Fixed time period

DATA SOURCE

Administrative data
Medical record

LEVEL OF DETERMINATION OF QUALITY

Individual Case

PRE-EXISTING INSTRUMENT USED

Unspecified

Computation of the Measure**SCORING**

Rate

INTERPRETATION OF SCORE

Better quality is associated with a higher score

ALLOWANCE FOR PATIENT FACTORS

Unspecified

STANDARD OF COMPARISON

Internal time comparison

Evaluation of Measure Properties**EXTENT OF MEASURE TESTING**

Unspecified

Identifying Information**ORIGINAL TITLE**

Measure #2: timing of prophylactic antibiotics - administering physician.

MEASURE COLLECTION

MEASURE SET NAME

[Perioperative Care Physician Performance Measurement Set](#)

SUBMITTER

American Medical Association on behalf of the American College of Surgeons, the National Committee for Quality Assurance, and the Physician Consortium for Performance Improvement®

DEVELOPER

American College of Surgeons
National Committee for Quality Assurance
Physician Consortium for Performance Improvement®

FUNDING SOURCE(S)

Unspecified

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FINANCIAL DISCLOSURES/OTHER POTENTIAL CONFLICTS OF INTEREST

Conflicts, if any, are disclosed in accordance with the Physician Consortium for Performance Improvement® conflict of interest policy.

ENDORSER

National Quality Forum

INCLUDED IN

Ambulatory Care Quality Alliance
Physician Quality Reporting Initiative

ADAPTATION

This measure was harmonized to the extent possible to measures included in the Surgical Care Improvement Project (SCIP).

PARENT MEASURE

Unspecified

RELEASE DATE

2006 Oct

MEASURE STATUS

This is the current release of the measure.

SOURCE(S)

American College of Surgeons, Physician Consortium for Performance Improvement®, National Committee for Quality Assurance. Perioperative care physician performance measurement set. Chicago (IL): American Medical Association, National Committee for Quality Assurance; 2006 Oct. 11 p. [8 references]

MEASURE AVAILABILITY

The individual measure, "Measure #2: Timing of Prophylactic Antibiotics - Administering Physician," is published in the "Perioperative Care Physician Performance Measurement Set." This document and technical specifications are available in Portable Document Format (PDF) from the American Medical Association (AMA)-convened Physician Consortium for Performance Improvement® Web site: www.physicianconsortium.org.

For further information, please contact AMA staff by e-mail at cqi@ama-assn.org.

NQMC STATUS

This NQMC summary was completed by ECRI Institute on September 13, 2007.
The information was verified by the measure developer on October 26, 2007.

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